

Claims

1. A method of connecting a subscriber unit to a fiberoptic communication network via a fiberoptic interface device adapted to function as an interface device in a coarse wavelength division multiplex (CWDM) system, the interface device comprising:
an electric circuit arrangement,
a first receiving section adapted to receive a first opto-electric transceiver module including
a first receiver unit for receiving optical signals from an optical conduction path, the first receiver unit comprising a first opto-electrical converter for converting the received optical signals to electrical signals, which are adapted to be conducted to said electric circuit arrangement, and
a first transmitter unit for transmitting optical signals to an optical conduction path, the first transmitter unit comprising a first electro-optical converter for converting electrical signals, received from said electric circuit arrangement, to optical signals before they are transmitted from the transmitter unit,
a second receiving section adapted to receive a second opto-electric transceiver module including
a second receiver unit for receiving optical signals from an optical conduction path, the second receiver unit comprising a second opto-electrical converter for converting the received optical signals to electrical signals, which are adapted to be conducted to said electric circuit arrangement, and
a second transmitter unit for transmitting optical signals to an optical conduction path, the second transmitter unit comprising a second electro-optical converter for converting electrical signals, received from said electric circuit arrangement, to optical signals before they are transmitted from the transmitter unit,
wherein said first and second receiving sections are designed such that said first and second opto-electric transceiver modules may be

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plugged into the respective receiving section and unplugged therefrom,

wherein the method comprises the following steps:

- 5 arranging said first opto-electric transceiver module in said first receiving section and connecting this first opto-electric transceiver module to said fiberoptic communication network, providing a first electric transceiver module including

10 a receiver member arranged for receiving electrical signals from an electrical conduction path and for conducting corresponding electrical signals to said electric circuit arrangement, and

15 a transmitter member for receiving electrical signals from said electric circuit arrangement and for transmitting corresponding electrical signals to an electrical conduction path, wherein said first electric transceiver module is also designed such that it may be plugged into one of said receiving sections and unplugged therefrom,

20 arranging said first electric transceiver module in said second receiving section, and connecting said interface device, via said first electric transceiver module, to said subscriber unit via electrical conduction paths.

25 2. A method according to claim 1, wherein said first electric transceiver module is configured such that said receiver member is a passive receiver member, which conducts the received electrical signals from the electrical conduction path to said electric circuit arrangement without providing any amplification.

30 3. A method according to claim 1, wherein said first electric transceiver module is configured such that said transmitter member is a passive transmitter member, which conducts the received electrical signals from the electric circuit arrangement to the electrical conduction path without providing any amplification.

35 4. A method according to claim 1, wherein said first electric transceiver module is configured such that said receiver member is an active receiver member, which provides an amplification of the

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received electrical signals from the electrical conduction path before the signals are conducted to said electric circuit arrangement.

5 5. A method according to claim 1, wherein said first electric transceiver module is configured such that said transmitter member is an active transmitter member, which provides an amplification of the received electrical signals from the electric circuit arrangement before the signals are conducted to the electrical conduction path.

10 6. A method according to claim 1, wherein each of said first and second receiving sections is configured to receive a transceiver module of a standardized size.

15 7. A method according to claim 1, wherein said first opto-electric transceiver module is connected to said fiberoptic communication network via a multiplexer/demultiplexer.

20 8. A method according to claim 1, wherein said interface device, together with said attached first opto-electric transceiver module and said attached first electric transceiver module, is arranged to adapt the signals from said subscriber unit before transmitting the signals to said multiplexer/demultiplexer, and also to adapt signals from said multiplexer/demultiplexer before they are transmitted to said subscriber unit.

25 9. A method according to claim 1, wherein said interface device includes a circuit board, on which said electric circuit arrangement, said first receiving section and said second receiving section are arranged.

30 10. A method of testing the function of an interface device, the interface device being designed to function as an interface device in a coarse wavelength division multiplex (CWDM) system and to thereby form an interface device between a subscriber unit and a
35 fiberoptic communication network, the interface device comprising:
an electric circuit arrangement,

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a first receiving section adapted to receive a first opto-electric transceiver module including

5 a first receiver unit for receiving optical signals from an optical conduction path, the first receiver unit comprising a first opto-electrical converter for converting the received optical signals to electrical signals, which are adapted to be conducted to said electric circuit arrangement, and

10 a first transmitter unit for transmitting optical signals to an optical conduction path, the first transmitter unit comprising a first electro-optical converter for converting electrical signals, received from said electric circuit arrangement, to optical signals before they are transmitted from the transmitter unit,

15 a second receiving section adapted to receive a second opto-electric transceiver module including

20 a second receiver unit for receiving optical signals from an optical conduction path, the second receiver unit comprising a second opto-electrical converter for converting the received optical signals to electrical signals, which are adapted to be conducted to said electric circuit arrangement, and

25 a second transmitter unit for transmitting optical signals to an optical conduction path, the second transmitter unit comprising a second electro-optical converter for converting electrical signals, received from said electric circuit arrangement, to optical signals before they are transmitted from the transmitter unit,

30 wherein said first and second receiving sections are designed such that said first and second opto-electric transceiver modules may be plugged into the respective receiving section and unplugged therefrom,

wherein the method comprises the following steps:

providing a first electric transceiver module including

35 a receiver member arranged for receiving electrical signals from an electrical conduction path and for conducting corresponding electrical signals to said electric circuit arrangement, and

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5 a transmitter member for receiving electrical signals from said electric circuit arrangement and for transmitting corresponding electrical signals to an electrical conduction path, wherein said first electric transceiver module is also designed such that it may be plugged into one of said receiving sections and unplugged therefrom, arranging said first electric transceiver module in said first or second receiving section such that the first electric transceiver module is connected to said electric circuit arrangement, 10 connecting said first electric transceiver module, via electrical conduction paths, to a test equipment, and testing the functionality of said interface device with the help of the test equipment.

15 11. A method according to claim 10, comprising the steps of: providing also a second electric transceiver module including a receiver member arranged for receiving electrical signals from an electrical conduction path and for conducting corresponding electrical signals to said electric circuit arrangement, and 20 a transmitter member for receiving electrical signals from said electric circuit arrangement and for transmitting corresponding electrical signals to an electrical conduction path, wherein said second electric transceiver module is also designed such that it may be plugged into one of said receiving sections and unplugged therefrom, 25 arranging said second electric transceiver module in the other of said first and second receiving sections such that the second electric transceiver module is connected to said electric circuit arrangement, 30 connecting also said second electric transceiver module, via electrical conduction paths, to said test equipment, and testing the functionality of said interface device with the help of the test equipment.

35 12. A method according to claim 11, wherein said first and second electric transceiver modules are arranged such that said receiver

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members are passive receiver members, which conduct the received electrical signals from the electrical conduction paths to said electric circuit arrangement without providing any amplification.

5 13. A method according to claim 11, wherein said first and second electric transceiver modules are arranged such that said transmitter members are passive transmitter members, which conduct the received electrical signals from the electric circuit arrangement to the electrical conduction paths without providing any amplification.

10 14. A method according to claim 11, wherein said first and second electric transceiver modules are arranged such that said receiver members are active receiver members, which provide amplification of the received electrical signals from the electrical conduction paths before the signals are conducted to said electric circuit arrangement.

15 15. A method according to claim 11, wherein said first and second electric transceiver modules are arranged such that said transmitter members are active transmitter members, which provide amplification of the received electrical signals from the electric circuit arrangement before the signals are conducted to the electrical conduction paths.

20 16. A method according to claim 10 wherein each of said first and second receiving sections is configured to receive a transceiver module of a standardized size.

25 17. A method according to claim 10, wherein said interface device is configured such that, when it is to be used between said subscriber unit and said fiberoptic communication network, said first opto-electric transceiver module is to be attached to said first receiving section and to be connected to said fiberoptic communication network via a multiplexer/demultiplexer.

30 18. A method according to claim 17, wherein said interface device is configured such that, when it is to be used in said fiberoptic

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- communication network, said electric circuit arrangement, together with transceiver modules attached to said first and second receiving sections, is arranged to be able to adapt signals from said subscriber unit before transmitting the signals to said multiplexer/demultiplexer, and also to adapt signals from said multiplexer/demultiplexer before they are transmitted to said subscriber unit.
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- 10 19. A method according to claim 10, wherein said interface device includes a circuit board, on which said electric circuit arrangement, said first receiving section and said second receiving section are arranged.

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